

THE CRATER CHRONICLE

Checking the Roads Before Driving Into Snow

The NWS office in Medford receives numerous calls in the winter and early spring seasons with requests for road conditions. While meteorologists can provide *weather conditions* and a *weather forecast* for a pass, they cannot provide road conditions, such as closures, chain requirements, or whether the roads are currently snow- or ice-covered. This falls under the realm of a state's Department of Transportation. In Oregon, ODOT, or the Oregon Department of Transportation, monitors road conditions, schedules plowing or sanding, and declares pass closures or chain requirements. In California, CalTrans, or the California Department of Transportation, oversees this information.

When in Oregon, there are several ways to check the road conditions for Oregon's roads. ODOT manages the phone number **511**. Simply dial this phone number if you are located in Oregon to access all of the current road conditions. You can also dial **1 (800) 977-ODOT (6368)**. If you are located out of state and are interested in road information for Oregon's roads, dial **1 (503) 588-2941**.

Second, ODOT maintains the



very popular and award-winning website <http://www.tripcheck.com>. TripCheck celebrated its 10th anniversary this year and recently surpassed six billion "hits" to the website. If you have a mobile phone, you can access the website at <http://m.tripcheck.com>.

Finally, ODOT started a new service last year utilizing **Twitter** feeds for its various highways, routes, cities, and mountain passes. You can "follow" the highways or mountain passes you are interested in, and road conditions, closures, and chain requirements related to that specific road will be noted on the feed. To access their Twitter feeds, go to <http://www.tripcheck.com>, and click on the "Twitter" tab in the upper-right corner of the page.

For California, CalTrans operates the CalTrans Highway Information Network (CHIN). Simply dial **1 (800) 427-ROAD (7623)** to access all information

related to California's roads. In California, road information on 511 only works from the Sacramento area southward at this time.

On the web, CalTrans offers web cameras of various highways and routes across California. You can also input the route or highway number you are interested in to receive current road conditions. Begin by accessing <http://www.dot.ca.gov/>. Place your mouse over the "Travel" tab near the top of the page. Click on "Highway Conditions" to input the highway number you are interested in. Click on "Live Traffic Cameras" and select "Northeastern California Traffic Cameras" to view road cameras for Siskiyou and Modoc Counties. Traffic cameras from other cities and regions across the entire state are also able to be viewed from this site.

Safe travels from NWS Medford!

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**Winter Begins
December 21 at
3:38 pm PST.**



From the Desk of the Meteorologist-In-Charge

By John Lovegrove

Weather occurs every day, but in southern Oregon and northern California, the most active period by far is fall and winter. The National Weather Service, and in particular WFO Medford, have stepped up efforts to inform key customer groups about impending significant weather. These actions go beyond the writing of our basic weather warning products.

When an impact event is forecast, NWS Medford can provide on-line briefing webinars that allow customers to plan how they will respond to the event. These briefings are not open to the general public and are limited to response agencies such as ODOT, CalTrans, emergency



services, law enforcement, fire departments, health departments, and hospitals, to name a few. Graphics are used to illustrate what is developing and how that will affect the area.

In the briefing, the NWS forecaster provides the expected conditions and impacts. The

forecaster can also convey their confidence in the event occurring and the full range of conditions that could occur. This is important information since many response agencies need to know how bad it *could* be not just how bad we *expect* it to be. The briefings are also a great opportunity for agencies to ask questions directly to an NWS forecaster.

Events that can trigger a briefing include snow at low elevations, heavy mountain snow, flooding, high winds, thunderstorm outbreaks, extreme cold, and tsunamis. When to conduct a briefing is up to forecaster discretion. If the forecaster on duty determines the event will be signifi-

cant, a briefing can be scheduled. The announcement goes out via e-mail to all that have signed up.

Since beginning this program, WFO Medford has conducted about five briefings per year. Sometimes multiple briefings are held for events to provide updated information. The typical audience for a briefing is about 30 people.

Any readers that are associated with response and public safety groups can be added to our briefing e-mail list. Simply contact WCM Ryan Sandler at ryan.sandler@noaa.gov, giving your affiliation, e-mail, and asking to be added to the briefing webinar e-mail list.

Already a Weather Spotter? Become a Stream Spotter, Too!

By Spencer Higginson, Service Hydrologist

We have passed the Thanksgiving holiday and are into the Christmas season. The winter rains have begun and the rivers are or will soon be rising. Rising rivers bring greater potential for flooding. The peak of the flood season in our area is typically between Christmas and New Years. The National Weather Service (NWS) provides watch, warning, and advisory products to help people prepare for any water-related problems that may occur, as well as provide information on river and lake levels.

As a National Weather Service Weather Spotter, you may be wondering; how can I help? *Information* is the answer. We

generally know how high the water is but that is not enough. We need to know how that water level is affecting the area. For example, if we issue a flood warning when a river reaches 15 feet but there are flood impacts at 12 feet, we have missed the opportunity to help people prepare. What you can do is take note of any impacts to roads, fields, buildings, etc. caused by high water. It is extremely helpful to note these impacts as well as the date and time that they occur. Knowing these impacts and their cause is the best way for the NWS to help your communities prepare for flooding.



Service Hydrologist Spencer Higginson takes a water level reading during a service visit to Crater Lake National Park.

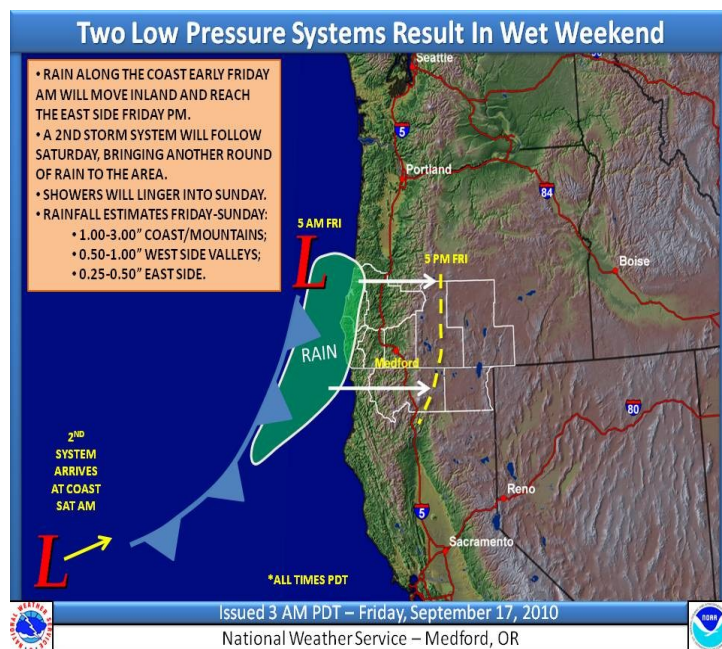
NWS Medford Introduces the Weather Story Graphic

If you are a frequent visitor to the NWS Medford website at <http://www.weather.gov/medford>, you may have noticed a current weather headline near the top of the page that leads to a graphic similar to one on the right. This graphic is known as the Weather Story and is a new addition to the NWS Medford website since this past summer. The Weather Story displays any noteworthy weather events that are currently occurring or anticipated to occur within a week's time in a graphical format. Weather Story graphics are created if hazardous weather watches, warnings, advisories, or statements are in effect; if near-record or record-setting weather is expected to occur; or if significant changes are expected in the

weather within the next several days that would mark a significant departure from the current weather regime over Southwest Oregon and Northern California.

If you have not viewed the Weather Story graphic yet, we encourage you to check it out. There will always be a link to the Weather Story on the front page of the NWS Medford website when a graphic has been produced. Any comments regarding the Weather Story graphic may be sent to our webmaster; the email address is provided at the bottom of the webpage.

If you are traveling to other areas of the West, visit the webpage of the local NWS office for your location, accessible from



<http://www.nws.noaa.gov>.

Numerous NWS offices in the West are producing a Weather

Story graphic, allowing you to anticipate what to expect during your travels.

Should the Clouds Clear, the Winter Sky Comes Alive!

Clouds prevail much of the time across Southwest Oregon and Northern California in the winter to limit nighttime sky-watching. If the clouds clear, however, there are several opportunities to bundle up, head outside, and train your eye on the sky, providing a brief break from the doldrums of winter.

December kicks off with the Geminids meteor shower. The Geminids rival the Perseids of August for one of the best meteor showers of the year. This year, the Geminids will get underway December 4, with the peak of the show occurring the night of December 13-14, 2010,



© NASA/Jimmy Westlake 1985

before winding down on December 16. More than 50 meteors per hour will be seen during the peak of the event and appear to radiate out of the constellation Gemini. Ordinarily, this meteor shower gets underway around 9 or 10 p.m., making it easy for children to stay up and watch.

This year, however, the moon does not set until after midnight, which will hinder visibility until then. As a result, optimal viewing for the Geminids will be after 2 a.m., looking to the east.

The active December sky continues this year as a total lunar eclipse will take place December 21. Mark your calendar now, as the moon will almost be directly overhead, providing an excellent show on a rare event, so long as the clouds cooperate! The eclipse can be seen over the Americas, Europe, eastern Asia, Australia, and the Pacific Ocean. In North America, the moon will be in total eclipse beginning

shortly before midnight and lasting until nearly 1 a.m., for a total of 72 minutes.

As 2010 winds down and 2011 gets underway, the Quadrantids (or Bootids) meteor shower begins to be visible with up to 40 meteors per hour at the peak. Active from December 28, 2010, until January 12, 2011, the peak showing will occur on January 3-4, with optimal viewing after 2:30 a.m. in a dark location. The meteors appear to radiate from the constellation Bootes. With only a few hours of active viewing time, this meteor shower is not as widely known as others but still lights up the night sky.

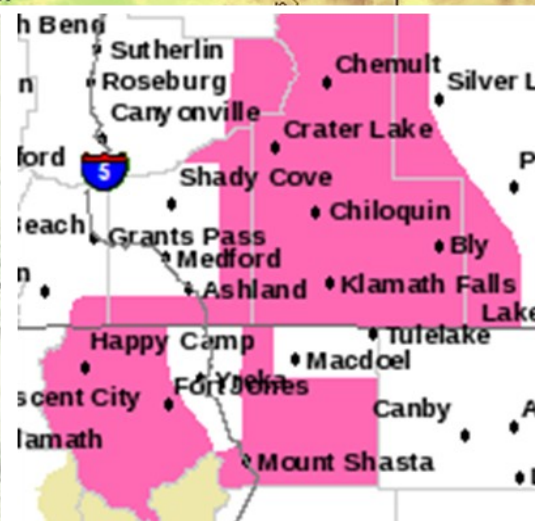
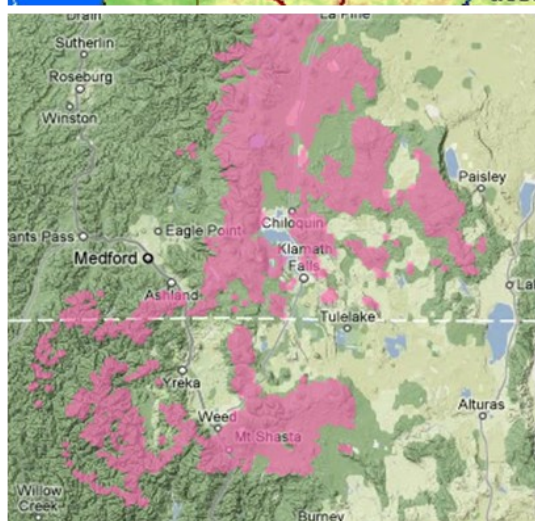
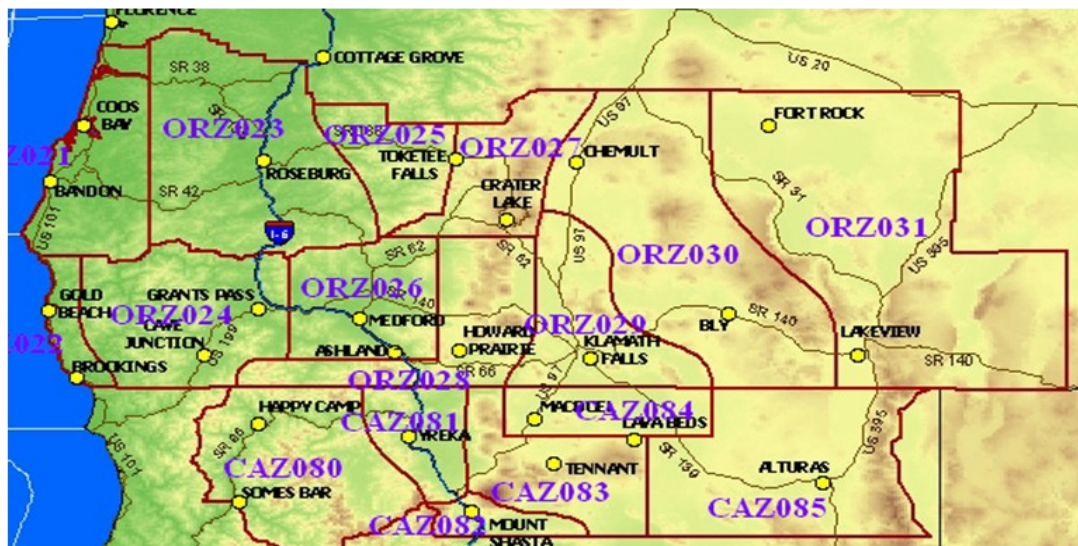
NWS Medford Utilizes Phenomena-Based Weather Hazards

By Ryan Sandler, Warning Coordination Meteorologist

For many years, our forecasts, watches, advisories, and warnings have been issued for large areas called zones. The top graphic to the right illustrates these zone boundaries. These boundaries are smaller than our counties but still larger than the State of Rhode Island. While some of the zones were drawn based on areas of similar climates, many of these zones contain areas of widely-varying elevations.

Due to advances in forecasting we can often predict that only certain parts of these zones will be impacted by severe winter weather. For example, Mount Shasta City area receives significantly more snow than Dunsmuir. However, these two communities are in the same zone, which is located in south-central Siskiyou County and known as Zone 82 in California. Conditions can be much worse in Mount Shasta City at an elevation near 3500 feet than Dunsmuir at an elevation near 2400 feet. Heavy snow might be accumulating in Mount Shasta City while a cold rain falls in Dunsmuir.

We now have the ability to show just those areas we believe will be impacted by hazardous weather. The two lower graphics to the right show a recent winter storm warning in pink. The graphic on the lower left is the way we will show a winter storm warning in the future. The pink area in the warning is smaller and mostly shows areas above 4500 feet, except in the Mount Shasta region where the warning is



above 3500 feet. The city of Dunsmuir is excluded from the warning. While many of the areas not highlighted in the warning are still expected to receive snow, the accumulations will not be enough to warrant a winter storm warning. The map on the lower right is the current way this winter storm warning is displayed on our home page. Many areas are unnecessarily included in the winter storm warning, including Dunsmuir. While NWS Medford will be utilizing

phenomena-based hazards when composing watches, warnings, and advisories, these changes will not be immediately obvious on the large map on our website for some time, so look for these improvements to come in the future. In the meantime, click on the point for a forecast you are interested in and read the watches, warnings, and advisories that are in effect to know whether or not it impacts the location and elevation you are interested in.

We look forward to leveraging our advances in technology and science by implementing phenomena-based weather hazards. These hazards will not be limited to just winter storms but also high winds, dense fog, hard freezes, and frost. We look forward to better serving our customers by providing more precise forecasts, advisories, watches, and warnings. Comments can be sent to me at:

Ryan.Sandler@noaa.gov.

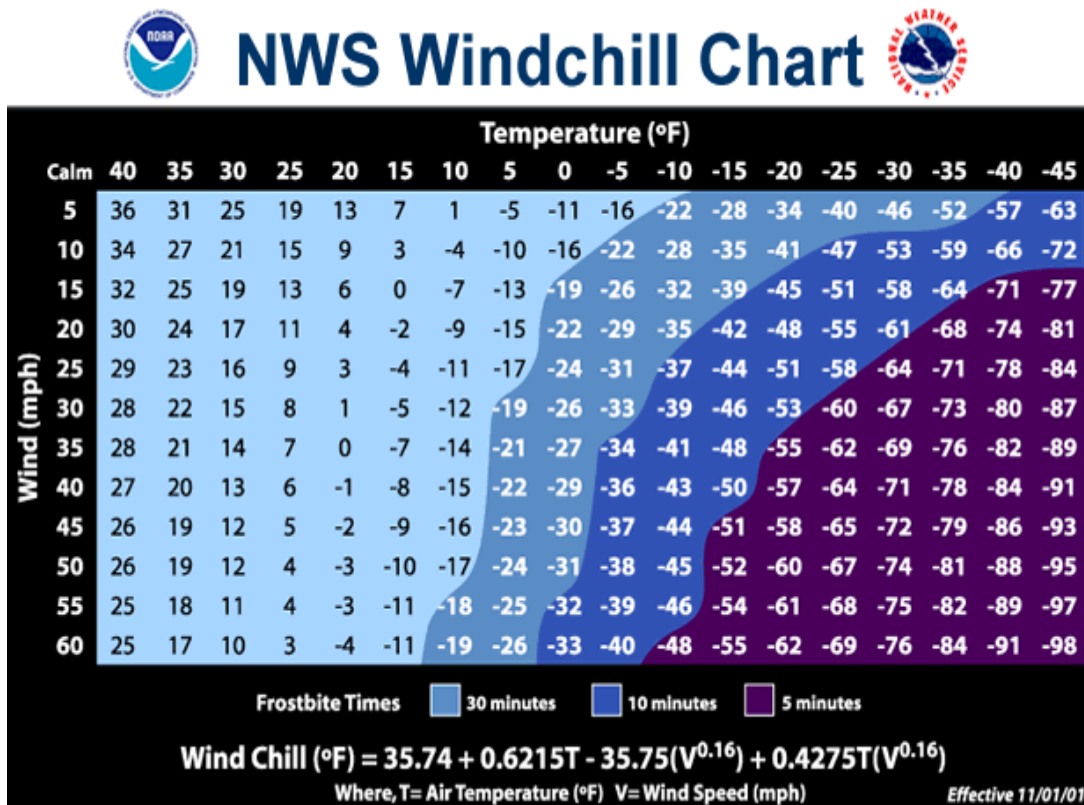
When Venturing Outdoors, Stay Safe This Winter Season

By Michael Ottenweller, Meteorologist Intern

Winter is upon us here in Southern Oregon and Northern California. With the season comes snow, shorter days, cold temperatures, and treacherous roads. A few strong storms have already made their way through the area, creating plenty of snow for the higher elevations and cold temperatures for almost everyone. With La Niña expected to influence the weather patterns for the 2010-2011 Winter season, the cold and snow will likely prevail through at least early next year. As we continue on into this pattern, we want to take a minute to remind everyone about winter safety.

The most common problem throughout our region is winter travel. Crossing over Siskiyou Summit on Interstate 5 or traveling many of Oregon or California's back roads can be a disconcerting experience for anyone. Being prepared before you go is the key to arriving safely. Make sure to winterize your vehicle early in the season. Prepare an emergency kit to include at least jumper cables, extra warm clothes, non-perishable food, bottled water, a first aid kit, a flashlight, and a shovel. Should you get stuck, stay with your vehicle and use your cell phone to call for help.

Another major factor this time of year is the cold. The thermometer has already dropped to 22°F in Medford, while Lakeview set an all-time November record of -15°F on the morning of November 24th. On average, over 1,500 people in the U.S. are treated for cold-weather injuries



The official National Weather Service Wind Chill Chart illustrates how air temperature and wind speed combine to measure how cold it will feel against a person's skin. When exposed to those elements, the colors demonstrate the amount of time that can elapse before frostbite will set in.

each year. The most common injuries are frostbite and hypothermia. One of the biggest factors in determining how cold it will feel on a person's skin is combining the effect of temperature and wind. The result is referred to as Wind Chill. The NWS updated its Wind Chill equation in 2001 to make it even more applicable to people. Using the chart above, the -15°F temperature in Lakeview earlier in November would produce a wind chill of -28°F if the wind was only 5 mph, and frostbite could set in within 30 minutes.

You can avoid both frostbite and hypothermia this year by follow-

ing a few simple guidelines. Dress warmly in layers before heading out into the cold. Layers allow you to quickly regulate your temperature for whatever activity you are doing. Be sure your exterior layers and footwear are waterproof. Getting wet or sweating through your clothes will only accelerate the effect of the cold. Cover exposed skin as much as possible. Monitor yourself and your friends and family while outdoors for signs of cold-weather injury. White or waxy skin is often the first sign of frostbite. Symptoms of hypothermia include uncontrollable shivering, slow speech, memory

lapses, frequent stumbling, drowsiness, and exhaustion. If you notice any of these in yourself or others, find a way to start slowly warming the person and seek medical assistance.

The cold also impacts pets and other animals. For those kept outdoors, make sure they have access to a sheltered area. Extra food and fresh water should also be made available.

As always, your best defense against all winter hazards is to arm yourself with information. Check the latest weather conditions and road reports before you venture out.

R. V. Airport & NWS Medford Host Aviation Open House

On September 14, 2010, over 20 general aviation pilots from Southern Oregon and Northern California attended the first annual Medford Weather Forecast Office (WFO) Aviation Open House. The event began at the NWS Medford office before moving next door to the new Rogue Valley International-Medford Airport terminal. By attending the Open House, some pilots were able to receive FAA WINGS pilot proficiency credits.

While at the WFO, pilots received a tour of the office, and forecasters on duty provided a demonstration of how Terminal Aviation Forecasts (TAFs) are composed and the data used in producing them. The Open House then continued at the airport, where NWS Forecasters Shad Keene and Mike Petrucelli each gave a presentation focused on various aviation services offered by the National Weather Service. Mike's presentation provided an overview of the Area Forecast Discussion (AFD). The AFD is a popular product from the NWS written by the forecasters on duty, which summarizes their thoughts on the current and upcoming weather pattern. It included how to find and interpret the AFD; how to utilize the Aviation Weather Discussion, a subset of the AFD; how to use weather charts; and how to understand satellite images.

Shad's presentation highlighted the Center Weather Service Units (CWSUs) and various aviation products found on the Internet. The CWSUs are a branch of the National Weather Service located in various cities across the U.S., focusing solely on weather and its impact on the aviation industry. They work closely with the FAA and are often found working alongside Air Traffic Control in major cities. Before arriving in Medford, Shad worked at a CWSU in the San Francisco Bay Area and was able to provide valuable insight in how the CWSU and its products can assist local pilots. In addition to the CWSU's mission and its products, his presentation displayed products available on the Internet from the Avia-

tion Weather Center, which serves the global airspace system from Kansas City, Missouri.

Following the presentations, the new NWS Medford Aviation Weather webpage was introduced. The new Aviation page provides tabs across the top to quickly access valuable weather information needed by pilots before taking off. This includes the Aviation Weather Discussion from the Area Forecast Discussion, satellite and radar images, wind directions and wind speeds from the ground through various heights in the atmosphere, and weather maps showing conditions at the surface over a region. Recent Pilot Reports (PIREPs) can also be displayed on a regional map. PIREPs are messages sent from pilots already in flight regarding turbulence, weather and sky conditions, and icing. A link is also provided to the Aviation Weather Center's AIRMETs and SIGMETs currently in effect. The Airman's Meteorological Advisory (AIRMET)

and Significant Meteorological Advisory (SIGMET) are important weather bulletins issued concerning the safety of aircraft and aircraft operations. This includes convective weather such as thunderstorms; turbulence; icing; very strong surface winds; restricted visibility; and large amounts of dust, sand, or volcanic ash in the atmosphere. The day concluded with a roundtable discussion on the new web page and other services offered to pilots by the National Weather Service.

With the success of this first Aviation Open House, NWS Medford and the Rogue Valley International-Medford Airport look forward to teaming up again and hosting these yearly events for local pilots. If you are a pilot in Southern Oregon or Northern California and would like more information on NWS Aviation, please email Mike or Shad at:

Michael.Petrucelli@noaa.gov &

Noel.Keene@noaa.gov.



A screen capture shows the new Aviation Weather webpage on the NWS Medford website. Find it by clicking on the Aviation link on the left blue menu from <http://www.weather.gov/medford>.

NATIONAL WEATHER SERVICE - MEDFORD, OREGON



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Visit Our Website!

<http://www.weather.gov/medford>

Our Vision

Professionals focusing on science, teamwork, and customer service to design and deliver the best decision-support information to our community.

Our Mission

Our team at the National Weather Service Office in Medford strives to deliver the best observational, forecast, and warning information through exceptional customer service, extensive training and education, maintaining quality electronic systems, and relying upon an outstanding team of weather spotters and cooperative observers. We do this within the overall mission of the NWS:

To provide weather, hydrologic, and climate forecasts and warnings for the United States, its territories, adjacent waters and ocean areas, for the protection of life and property and the enhancement of the national economy. NWS data and products form a national information database and infrastructure which can be used by other governmental agencies, the private sector, the public, and the global community.

Our Values

Trust, Integrity, Professionalism, Service, Teamwork, Ingenuity, Expertise, and Enthusiasm.

About Us

The Weather Forecast Office in Medford, Oregon, is one of more than 120 field offices of the National Weather Service, an agency under the National Oceanic and Atmospheric Administration and the United States Department of Commerce. The Weather Forecast Office in Medford serves 7 counties in southwestern Oregon and 2 counties in northern California, providing weather and water information to more than a half-million citizens. We are also responsible for the coastal waters of the Pacific Ocean from Florence, Oregon, to Point St. George, California, extending 60 miles offshore. The office is staffed 24 hours a day, 7 days a week, and 365 days a year by a team of 26 meteorologists, hydrologists, electronic technicians, hydro-meteorological technicians, and administrative assistants, under the direction of Meteorologist-In-Charge John Lovegrove.

